Universidad de Navarra

Econometrics II (MEF)

Guía docente 2023-24

INTRODUCTION

Course description:

The objective of the course is to make the student familiar with basic statistical and econometric techniques that are used in the analysis of microeconomic data. The course covers both the theoretical and the applied aspects of these techniques. We will cover some relevant theory in lectures, but we will focus on applications of this theory, and the lectures will include examples and in-depth discussions of empirical papers that employ the different techniques.

GENERAL INFORMATION

- **School:** Economics and Business Administration
- **Department**: Economics
- **Degree:** Master in Economics and Finance (MEF)
- **Module:** Materias obligatorias (compulsory)
- **Subject Matter:** Econometrics
- **Subject**: Econometrics II. Microeconometrics
- **ECTS credits**: 3.5 (87.5 hours of work, approximately)
- **Semester:** Winter
- **Language**: English
- **Professors**: Dr. Alex Armand (aarmand@unav.es) and Dr. Jaime Millan Quijano (jmillanq@unav.es)
- **Office Hours:** Contact by email for appointment
- **Class Schedule:** The classes will take place during the months of January to March 2024. Schedule to be confirmed.

COMPETENCES

Competences of the Subject

- Understand identification and limitations of different data structures.
- Understand and critically choose different estimators for micro-level data.
- Being able to run single and multiple regressions and to interpret its results.
- Being able to work with panel data, to run fixed and random effects models.
- Being able to work with limited dependent variables.
- Understand sample selection problems.

Competences of the Master

- CG2) To provide students with the appropriate and necessary mathematical and economical techniques to carry out the work, both theoretical and empirical, in the fields of economic theory and finance.
- CE3) Appropriately use the econometric techniques employed in the analysis of microeconomics and in the analysis and modeling of financial time series.
- CE4) Handle the main statistical and econometric software used in the areas of economics and finance.

PROGRAM

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The course will cover the following topics (Lectures 1-5: Armand / Lectures 6-10: Millan)

It is possible that we will need to make small changes to the program as we go through the material. Relevant changes and additions will be announced and/or indicated.

OUTLINE

1. Identification and linear models
2. Introduction to non-linear models
3. Non-linear models I
4. Non-linear models II
5. Selection models
6. Instrumental Variable
7. Panel Data Models I
8. Panel Data Models II
9. Policy Evaluation methods I
10. Policy Evaluation methods II

EDUCATIONAL ACTIVITIES

The course is equivalent to 87.5 hours divided in lectures, assignments and personal study.

The course will cover 30 hours of lectures. Students are required to attend classes and to prepare the lectures. Assigments will cover 10 hours, while personal study will cover approximately 47.5 hours.

The lecture notes and the course material will be updated in the "Program" section along with the course.

ASSESSMENT

CONVOCATORIA ORDINARIA

The grading of the course is divided in the following components:

Individual assignment: 25%

The student will have to prepare presentation on a pre-defined measurement application. The objective is to choose how to measure a relation between two variables, use an application with real-world data, discuss the result, identify violations of general assumptions and propose / apply solutions. The last lecture of the course will be organized as student presentations of 10 minutes on their assignment and on a class discussion. The topic can be discussed with the instructor.

Problem Sets: 15%

Final exam: 60% – Sample exam question. **Important:** A minimun grade of 3.5 is required in the final exam in order to pass the course.

CONVOCATORIA EXTRAORDINARIA

A student who fails the course has to retake the final exam. It counts 60%, while the weight of the continuous evaluation is unchanged.

(*) Students with special learning needs

Accommodation will be provided for students with special learning needs, either regarding the methodology and/or evaluation of the course, but they will be expected to fulfill all course objectives.

OFFICE HOURS

Contact by email:

- Dr. Alex Armand (aarmand@unav.es)

- Dr. Jaime Millan Quijano (mquijano@unav.es)

BIBLIOGRAPHY AND RESOURCES

The course will not follow a specific textbook, but the following three books are good general references for microeconometrics:

Wooldridge, J. (2001), **Econometric Analysis of Cross-Section and Panel Data**. MIT Press, Cambridge, MA. Find it in the Library

Angrist, Joshua D., and Jörn-Steffen Pischke (2008), **Mostly harmless econometrics: An empiricist's companion**. Princeton university press, 2008. Find it in the Library

[MORE ADVANCED] Cameron, A. C., and P. K. Trivedi (2005), **Microeconometrics: Methods and Applications**. Cambridge University Press, New York, NY. Find it in the Library